



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2022-0677; Project Identifier MCAI-2021-01378-T; Amendment 39-22230; AD 2022-23-03]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc., Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Bombardier, Inc., Model BD-700-2A12 airplanes. This AD was prompted by the investigation of erroneous radio altimeter data that was displayed on an in-service airplane. It was revealed that certain radio altimeter coaxial cables used by the radio altimeter systems, in the aft fuselage equipment bay, were damaged. This AD requires replacing affected radio altimeter coaxial cables. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES:

AD Docket: You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2022-0677; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday

through Friday, except Federal holidays. The AD docket contains this final rule, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

Material Incorporated by Reference:

- For service information identified in this final rule, contact Bombardier Business Aircraft Customer Response Center, 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 1-514-855-2999; email ac.yul@aero.bombardier.com; internet bombardier.com.

- You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available at regulations.gov under Docket No. FAA-2022-0677.

FOR FURTHER INFORMATION CONTACT: Thomas Niczky, Aerospace Engineer, Avionics and Electrical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7347; email 9-avs-nyacocos@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Bombardier, Inc., Model BD-700-2A12 airplanes. The NPRM published in the *Federal Register* on June 13, 2022 (87 FR 35686). The NPRM was prompted by AD CF-2021-45, dated December 7, 2021, issued by Transport Canada Civil Aviation (TCCA), which is the aviation authority for Canada (referred to after this as the MCAI). The MCAI states that the erroneous radio altimeter

data was displayed on an in-service airplane. It was revealed that certain radio altimeter coaxial cables in the aft fuselage equipment bay had been reported damaged (from radio altimeters A28 and A29 to antennas), due their light weight construction, and their proximity to the access door on the eBay. The damage to or kinks in the radio altimeter coaxial cables, if not corrected, could lead to signal loss or degradation, and possibly unannounced loss of terrain awareness warning system aural cues during approach.

In the NPRM, the FAA proposed to require replacing affected radio altimeter coaxial cables. The FAA is issuing this AD to address the unsafe condition on these products.

You may examine the MCAI in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2022-0677.

Discussion of Final Airworthiness Directive

Comments

The FAA received a comment from Netjets. The following presents the comment received on the NPRM and the FAA's response to the comment.

Request to Refer to Updated Bombardier Service Bulletin

Netjets stated Bombardier Service Bulletin 700-91-7502, Revision 02, dated April 5, 2022, has been released. The FAA infers that Netjets is requesting that the proposed AD be revised to refer to Bombardier Service Bulletin 700-91-7502, Revision 02, dated April 5, 2022 (the proposed AD refers to Bombardier Service Bulletin 700-91-7502, Revision 01, dated August 31, 2020, as the appropriate source of service information).

The FAA agrees with the request. Bombardier Service Bulletin 700-91-7502, Revision 02, dated April 5, 2022, adds minor changes that do not affect the substantive requirements proposed in the NPRM, including adding references to an advisory document and the MCAI AD. The FAA has revised this final rule to refer to Bombardier

Service Bulletin 700-91-7502, Revision 02, dated April 5, 2022. The FAA has also revised paragraph (i) of this AD to provide credit for actions done in accordance with Bombardier Service Bulletin 700-91-7502, Revision 01, dated August 31, 2020.

Conclusion

This product has been approved by the aviation authority of another country and is approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA reviewed the relevant data, considered the comment received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on this product. Except for minor editorial changes, and any other changes described previously, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Related Service Information under 1 CFR Part 51

The FAA reviewed Bombardier Service Bulletin 700-91-7502, Revision 02, dated April 5, 2022. This service information specifies procedures for replacing affected radio altimeter coaxial cables. The replacement includes removing the existing radio altimeter coaxial cables, replacing with new coaxial cables, installing new clamps to accommodate the coaxial bend radius along the coaxial routing, and re-routing new radio altimeter coaxial cables from the wing to fuselage fairing, in the left and right aft fuselage, and in the aft fuselage belly fairing.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

The FAA estimates that this AD affects 27 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated costs for required actions

Labor cost	Parts cost	Cost per product	Cost on U.S. operators
70 work-hours X \$85 per hour = \$5,950	\$13,808	\$19,758	\$533,466

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some or all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the

national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

(1) Is not a “significant regulatory action” under Executive Order 12866,

(2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2022-23-03 Bombardier, Inc.: Amendment 39-22230; Docket No. FAA-2022-0677;

Project Identifier MCAI-2021-01378-T.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bombardier, Inc., Model BD-700-2A12 airplanes, serial numbers 70006 through 70053 inclusive, certificated in any category.

(d) Subject

Air Transport Association (ATA) of America Code 34, Navigation.

(e) Unsafe Condition

This AD was prompted by the investigation of erroneous radio altimeter data that was displayed on an in-service airplane. It was revealed that certain radio altimeter coaxial cables in the aft fuselage equipment bay were damaged. The FAA is issuing this AD to address damage to or kinks in the radio altimeter coaxial cables, which could lead to signal loss or degradation, and possibly un-annunciated loss of terrain awareness warning system aural cues during approach.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Replacement of Radio Altimeter Coaxial Cables

Within 12 months after the effective date of this AD, replace affected radio altimeter coaxial cables, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 700-91-7502, Revision 02, dated April 5, 2022, except as specified in paragraph (h) of this AD.

(h) No Reporting Requirement

Although Bombardier Service Bulletin 700-91-7502, Revision 02, dated April 5, 2022, specifies to submit certain information to the manufacturer, this AD does not include that requirement.

(i) Credit for Previous Actions

This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using the service

information identified in Bombardier Service Bulletin 700-91-7502, dated February 6, 2020; or Bombardier Service Bulletin 700-91-7502, Revision 01, dated August 31, 2020.

(j) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the certification office, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or Bombardier, Inc.'s TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

(k) Additional Information

(1) Refer to TCCA AD CF-2021-45, dated December 7, 2021, for related information. This TCCA AD may be found in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2022-0677.

(2) For more information about this AD, contact Thomas Niczky, Aerospace Engineer, Avionics and Electrical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7347; email 9-avs-nyaco-cos@faa.gov.

(3) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (1)(3) and (4) of this AD.

(I) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Bombardier Service Bulletin 700-91-7502, Revision 02, dated April 5, 2022.

(ii) [Reserved]

(3) For service information identified in this AD, contact Bombardier Business Aircraft Customer Response Center, 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; telephone 1-514-855-2999; email ac.yul@aero.bombardier.com; internet bombardier.com.

(4) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fr.inspection@nara.gov, or go to: www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued on October 27, 2022.

Christina Underwood, Acting Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

